



## Healthy, Sustainable, Safe Cleaning Options, Solutions, Challenges-UW



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## Why Do We Care?



**What You do is important!**  
**How you Choose to do it is important!**  
**You make a Difference!**  
**You are part of the Environmental Health and Safety Solution!**

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## Presentation Overview

- Section 1-Process Evolution
- Section 2-Green Cleaning and Sustainability
- Section 3-Options, Solutions, Challenges
- Section 4-Resources

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## Section 1 Process Evolution

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### University of Washington Philosophy

- Cleaning Program - Work in Progress
- Quality + Service + Cleanliness = Value
- Large institution
  - Employee 300 Full time custodial workers
  - Support 240 buildings
    - Historical – LEED Gold
  - Serve 42,974 students
  - 5,500,000 ft<sup>2</sup> of hard floor surface
  - 2,257,191 ft<sup>2</sup> of carpet



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### UW-Cleaning Mission Statement

To provide excellent custodial services that provides exceptionally clean and sanitary learning, teaching, and working environments for students, faculty, staff and visitors.



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## Finding the Proper Balance

Custodial Concerns	Environmental Concerns
1. Perception of clean	1. Indoor Air Quality
2. Cost Containment	2. Hazardous Chemicals
3. Staff Shortage	3. Aquatic Toxicity
4. Language/Training	4. Environmental Illnesses
5. Population	5. Endocrine disruption

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## Establish a Written Cleaning Policy

Part 1	Introduction	
Part 2	Purpose	
Part 3	Goals and Strategies	

<http://www.washington.edu/admin/facserv/custodial/images/GreenPolicy.pdf>

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## Elements of a Cleaning Program

- Understand the unique requirements of your campus buildings.
- Continuously examine the entire cleaning process and identifying areas needing improvement.
- Program should be designed to have a positive impact on cleanliness and the health and performance of occupants.



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## Hazardous for Human Health

■ Asthma & respiratory ailments	■ Eye, nose, throat, and skin irritation
■ Burns	■ Fatigue
■ Cancer	■ Major organ damage
■ Dizziness/Headaches	■ Reproductive disorders

<http://depts.washington.edu/cwvs/Outreach/Events/SpecialEvents/May%2010%202007%20Steinemann.pdf>

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## Products of Concern

Aerosol Sprays  
 Acid Toilet Cleaner  
 Degreasers/Solvents  
 Disinfectants  
 Metal Polish  
 Graffiti/Paint Removers  
 Floor Strippers



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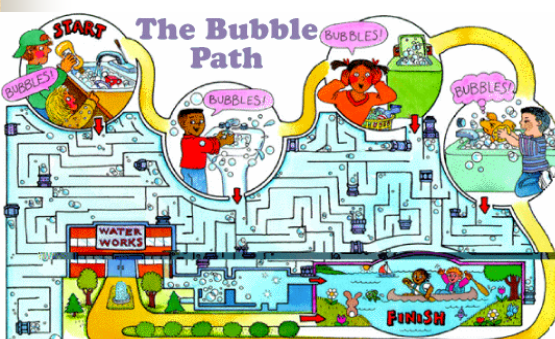
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## Hazardous for the Environment



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## Section 2 Green Cleaning and Sustainability

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### Environmental Stewardship and Sustainability

- Institutional Collaboration
- Reduce Environmental Impacts
- Protect Water Resources
- Conserve Natural Resources
- Ensure Regulatory Compliance
- Training the Next Generation



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### Why consider “green cleaning”?

- Helps you meet green purchasing mandates
- Promotes a healthier building environment
- Improves safety for janitorial workers
- Reduces your environmental footprint
- Helps create a more sizable market for cost effective high performance green products
- Helps position your organization as a leader in the use of sustainable business practices



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## Purpose of Appropriate Cleaning

- Prevent the spread of disease
- Kill specific germs
- Broad-spectrum product
- Use the right product
- Use appropriate manufacturer dilution ratio
- Maintain contact time




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## Sustainability Evaluation Process

- Reduced operating costs.
- Managed risk.
- Better productivity
- Satisfied occupants
- Increased building value
- Added competitive market value

**Reduce, reuse, then recycle.**





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## How to Clean Green

- Employee Training
- Use Green Chemicals
  - Green Seal-United States
  - Environmental Choice-Canada
- Use Green Cleaning Equipment
  - CRI Website [www.carpet-rug.org](http://www.carpet-rug.org)
- Use Green Processes and Procedures
  - ASTM E1971-05 "Standard Guide for Stewardship for Cleaning Commercial and Institutional Buildings"
  - NIOSH
  - EPA

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## WA Schools Using Safer Cleaners

- Anacortes Schools
- Bellevue School District
- Bellingham Schools
- Bethel Schools
- Bremerton Schools
- Northshore School District
- Sedro Woolley Schools
- Tumwater Schools

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## Section 3

### Options, Solutions, Challenges

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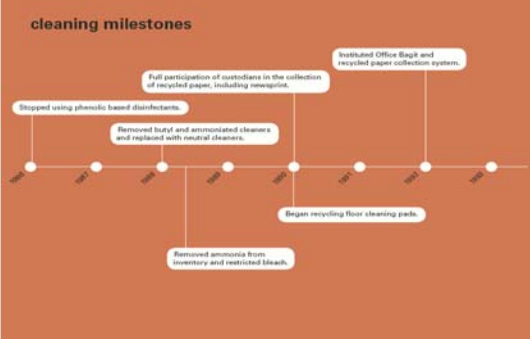
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### cleaning milestones



Timeline of cleaning milestones:

- 1994: Stopped using phenolic based disinfectants.
- 1995: Removed harsh and ammoniated cleaners and replaced with neutral cleaners.
- 1996: Full participation of custodians in the collection of recycled paper, including newspaper.
- 1997: Removed ammonia from inventory and restricted bleach.
- 1998: Began recycling floor cleaning pads.
- 1999: Instituted Office Bag and recycled paper collection system.
- 2000
- 2001
- 2002
- 2003
- 2004

30 Third Edition, December 2004

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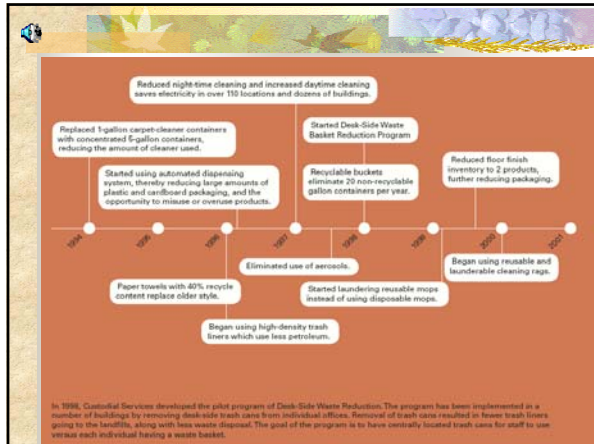
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## Microfiber Mop Systems

- Reduce chemical use (~50 – 75%)
- Cut water use (~ 90%) ~100,000 gallons/year
- Reduce injuries (chemical exposure, back strain, accidents)
- Effective (reduce dirt, avoid cross-contamination)

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## Fragrance Free Soap

- Dispensers in all campus bathrooms
- Mild Chemically
- Biodegradable
- Green Seal Certified
- Fragrances have no hygienic function




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## Low Flow and No Water Devices

**bowls and sinks**

Waterless urinals and ultra-low flow toilets will eventually replace most of the older, less efficient units. Low-flow toilets have already been installed, saving the community up to 60,000 gallons of water per year per toilet. Even though flushing is required for a fully functioning toilet, water use is reduced when compared to installing conventional toilets. Ultra-low flow toilets use only 1.6 gallons per flush (gpf) instead of 3 to 6 gpf are now being installed in various locations.

Flare restrooms were installed on buses throughout the campus, further reducing the amount of water used in restrooms.

As a result of roughly \$1 million in upgrades (2002 - 2005) awarded through the original water program to our clients, thousands of gallons of water (300,000) were saved in water and sewer charges. The water department will continue to provide ongoing savings and environmental benefits to the campus.




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## What's Happening Nationally

- Enormous changes in past 10 years
- Core standards have been developed
  - 10 chemical companies now have Green Seal Certified products
  - 2 paper companies have certified paper
  - Numerous vacuum cleaner manufacturers have been certified by Carpet and Rug Institute
- Major industry association promoting Green Cleaning
- Major cleaning contractors are adopting Green Cleaning strategies
- US Green Building Council




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## LEED Cleaning Credits

- Cleaning Can Impact 10+ Credits:
  - Sustainable Sites (2 Credits)
  - Water Efficiency
  - Energy and Atmosphere
  - Materials and Resources (3 Credits)
  - Indoor Environmental Quality (5 1/2 Credits)
  - Innovative Credits (1-4 Credit)




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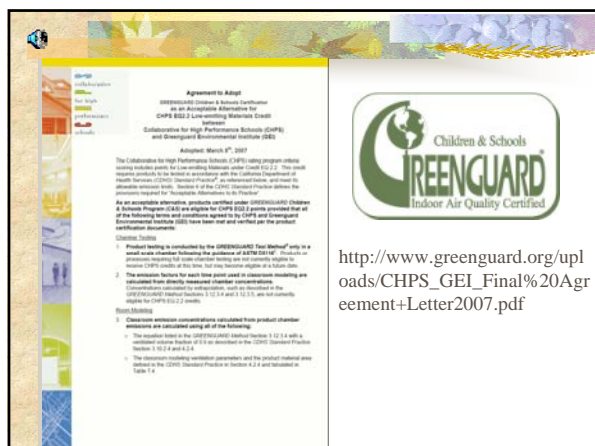
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[http://www.greenguard.org/uploads/CHPS\\_GEI\\_Final%20Agreement+Letter2007.pdf](http://www.greenguard.org/uploads/CHPS_GEI_Final%20Agreement+Letter2007.pdf)

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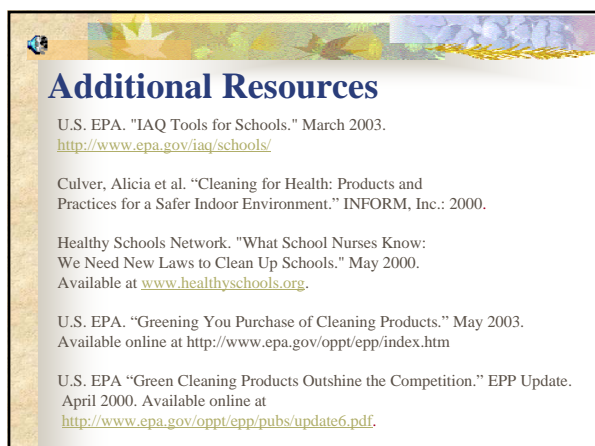
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**Green Cleaning**  
Pollution Prevention Calculator

■ <http://www.ofee.gov/janitor/index.asp>

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**National Healthy Schools Day**  
Healthy Schools Network, Inc.

CELEBRATE  
NATIONAL HEALTHY SCHOOLS DAY  
Monday, April 28, 2008  
[http://www.healthyschools.org/nhs\\_day.html](http://www.healthyschools.org/nhs_day.html)

the  
collaborative  
for high  
performance  
schools

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Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

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